



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,867	09/22/2006	Hiroyuki Kato	2006_1530A	4181
513	7590	12/23/2010		
WENDEROTH, LIND & PONACK, L.L.P.				EXAMINER
1030 15th Street, N.W.,				BADR, HAMID R
Suite 400 East			ART UNIT	PAPER NUMBER
Washington, DC 20005-1503			1781	
			NOTIFICATION DATE	DELIVERY MODE
			12/23/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[ddalecki@wenderoth.com](mailto:ddalecki@wenderoth.com)  
[eo@wenderoth.com](mailto:eo@wenderoth.com)

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,867	<b>Applicant(s)</b> KATO ET AL.
	<b>Examiner</b> HAMID R. BADR	<b>Art Unit</b> 1781

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on RCE, 11/24/2010.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,9 and 10 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,9 and 10 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-442)  
 3) Information Disclosure Statement(s) (PTO-SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/24/2010 has been entered.

Claims 1 and 9-10 are being considered on the merits.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gomi et al. (US 4,113,716; hereinafter R1) in view of JP 2003-023988 (Machine translation, hereinafter R2) and Hirota (JP-2002-112741; English abstract; hereinafter R3).

4. R1 discloses the production of soybean proteins isolates of high nitrogen solubility index (NSI). (co. 1, lines 50-60)

5. R1 discloses that the extracted protein undergoes a subsequent heat treatment by rapidly heating the isolated protein to a temperature of 110C-140C and retaining the

protein at such temperatures for 2 seconds to 3 minutes. R1 discloses that the method of heating can be direct, by contacting the protein with steam, or indirect heating. (col. 2, lines 64 to col. 3, line 6)

6. R1 discloses that the heat treated protein has high emulsification ability and gelling performance. (Col. 4, Example 1).

7. R1 is silent regarding the reaction of the heat treated protein with transglutaminase.

8. R2 discloses that soybean protein material can be reacted with transglutaminase to produce powdered soy milk. (Claims 1, 2). The process disclosed by R2 comprises mixing the soybean protein and transglutaminase and heating for the formation of the cross-linked product.

9. R2 discloses that the reaction product of transglutaminase and soybean protein will have high nutritional value, good taste and smoothness of texture. [0076]

10. R2 is silent regarding the use of soybean protein, and transglutaminase in the production of restructured foods containing meat.

11. R3 discloses the process for producing fishery paste product by combining transglutaminase and raw fish material comprising soybean protein and water. The mixture is then heated for the reaction of transglutaminase and fish and soybean proteins. The resulting restructured food material is claimed to be soft and rich in elastic texture. (English Abstract)

12. Therefore, a soybean protein solution undergone a heat treatment and reacted with transglutaminase, as disclose by R1 and R2, will have high emulsification and

gelling properties together with high nutritional quality and smoothness of the gel. The use of such a functional raw material to produce restructured food material having rich and elastic texture is clearly demonstrated by R3. Therefore, the invention as presently claimed does not appear to involve an inventive step.

13. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to prepare a soybean protein material of high emulsification and gelling properties to be used in restructured foods with high elastic texture. Absent any evidence to the contrary and based on the combined teachings of the cited references, there would be a reasonable expectation of success to make a soy protein and use in restructured meats.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HAMID R. BADR whose telephone number is (571)270-3455. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1781

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hamid R Badr  
Examiner  
Art Unit 1781

/Keith D. Hendricks/

Supervisory Patent Examiner, Art Unit 1781